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L6: Entry 4 of 4

File: USPT

Aug 12, 1980

US-PAT-NO: 4217345

DOCUMENT-IDENTIFIER: US 4217345 A

TITLE: 3-O-(.beta.-D-Glucuronopyranosyl)-soyasapogenol B

DATE-ISSUED: August 12, 1980

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shinohara; Masanao	Naruto			JP
Nakano; Yoshimasa	Tokushima			JP
Kaise; Hirotugu	Tokushima			JP
Izawa; Taketoshi	Tokushima			JP
Miyazaki; Wasei	Tokushima			JP

US-CL-CURRENT: 514/33; 514/885, 536/18.1

CLAIMS:

What is claimed is:

1. 3-O-(.beta.-D-glucuronopyranosyl)-soyasapogenol B represented by the formula (I): ##STR4## and pharmaceutically acceptable salts thereof.
2. A pharmaceutical composition having anticomplementary activity in animals comprising a therapeutically effective amount of the soyasapogenol derivative of the formula (I) or a pharmaceutically acceptable salt thereof ##STR5## and a pharmaceutically acceptable carrier.
3. The composition according to claim 2, wherein the amount of the soyasaponin derivative or the pharmaceutically acceptable salt thereof is about 1 to 70% by weight based on the entire weight of the pharmaceutical composition.
4. An antinephritic pharmaceutical composition comprising a therapeutically effective amount of the soyasapogenol derivative of the formula (I) ##STR6## or a pharmaceutically acceptable salt thereof and a pharmaceutically acceptable carrier.
5. A method for treating nephritis, which comprises administering the composition according to claim 4 to a nephritic patient in a daily dose of about 0.5 to about 20 mg/kg of body weight.

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L6: Entry 1 of 4

File: USPT

Sep 3, 2002

US-PAT-NO: 6444233

DOCUMENT-IDENTIFIER: US 6444233 B1

TITLE: Triterpene compositions and methods for use thereof

DATE-ISSUED: September 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Arntzen; Charles J.	Ithaca	NY		
Blake; Mary E.	Tucson	AZ		
Guterman; Jordan U.	Houston	TX		
Hoffmann; Joseph J.	Tucson	AZ		
Jayatilake; Gamini S.	Broomfield	CO		
Bailey; David T.	Boulder	CO		

US-CL-CURRENT: 424/725; 514/183

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC
Draw	Desc	Image									

☐ 2. Document ID: US 5955082 A

L6: Entry 2 of 4

File: USPT

Sep 21, 1999

US-PAT-NO: 5955082

DOCUMENT-IDENTIFIER: US 5955082 A

TITLE: Insecticidal factor from field peas

DATE-ISSUED: September 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bodnaryk; Robert P.	Winnipeg			CA
Fields; Paul G.	Winnipeg			CA
Xie; Yongshou	Winnipeg			CA
Fulcher; Kenneth A.	Saskatoon			CA

US-CL-CURRENT: 424/757

3. Document ID: US 4371524 A

Feb 1, 1983

DATE-ISSUED: February 1, 1983

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shinohara; Masanao	Naruto			JP
Nakano; Yoshimasa	Tokushima			JP
Kaise; Hirotsugu	Tokushima			JP
Izawa; Taketoshi	Tokushima			JP
Miyazaki; Wasei	Tokushima			JP

US-CL-CURRENT: 514/33

☐ 4. Document ID: US 4217345 A

Aug 12, 1980

DATE-ISSUED: August 12, 1980

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shinohara; Masanao	Naruto			JP
Nakano; Yoshimasa	Tokushima			JP
Kaise; Hirotsugu	Tokushima			JP
Izawa; Taketoshi	Tokushima			JP
Miyazaki; Wasei	Tokushima			JP

US-CL-CURRENT: 514/33; 514/885, 536/18.1

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L6: Entry 1 of 4

File: USPT

Sep 3, 2002

DOCUMENT-IDENTIFIER: US 6444233 B1

TITLE: Triterpene compositions and methods for use thereof

Detailed Description Text (9):

Since triterpenes and other related saponins have relatively large molecular weights and are of high polarity, their isolation can be challenging. A problem involved in the isolation of pure saponins is the presence of complex mixtures of closely related compounds, differing subtly either in the nature of the aglycone or the sugar part (nature, number, positions and chirality of attachment of the monosaccharides). Difficulties also are encountered with labile substituents such as esters. For example, the major genuine soybean saponin, a .gamma.-pyrone derivative (BOA), is only extracted by aqueous ethanol at room temperature. Extraction with heating (80.degree. C.) leads to fission of the ester moiety and formation of soyasaponin I (Bb) (Kudou et al., 1992). In plants, saponins are accompanied by very polar substances, such as saccharides and coloring matter, including phenolic compounds and the like, are not easily crystallized, and can be hygroscopic, making it even more difficult to obtain crystals.

Detailed Description Text (65):

An alternative determination method is to prepare fluorescent coumarin derivatives by esterification of the carboxylic acid moiety. By this means, soyasaponins were analyzed and determined quantitatively in different varieties and different organs of soybeans, with anthracene as internal standard (Kitagawa et al., 1984a; Tani et al., 1985).

Detailed Description Text (170):

This is another particle-induced desorption technique, in which keV ions impinging on the surface of a thin film of biomolecule induce the same desorption ionization as in PD-MS (Benninghoven and Sichtermann, 1978). The utility of this method in the structural investigation of three new bidesmosides, acetyl-soyasaponins A.sub.1, A.sub.2 and A.sub.3, isolated from American soybean seeds (*Glycine max*, Leguminosae) has been demonstrated. The significant fragment ion peaks provided information regarding the mode of acetylation in the monosaccharide units, as well as the sequence of these units (Kitagawa et al., 1988).

Detailed Description Text (235):

Preferred cancer cells for treatment with the instant invention include epithelial cancers such as skin, colon, uterine, ovarian, pancreatic, lung, bladder, breast, renal and prostate tumor cells. Other target cancer cells include cancers of the brain, liver, stomach, esophagus, head and neck, testicles, cervix, lymphatic system, larynx, esophagus, parotid, biliary tract, rectum, uterus, endometrium, kidney, bladder, and thyroid; including squamous cell carcinomas, adenocarcinomas, small cell carcinomas, gliomas, neuroblastomas, and the like. However, this list is for illustrative purposes only, and is not limiting, as potentially any tumor cell could be treated with the triterpene compounds of the instant invention. Assay methods for ascertaining the relative efficacy of the compounds of the invention in treating the above types of tumor cells and other tumor cells are specifically disclosed herein and will be apparent to those of skill in the art in light of the present disclosure.

Detailed Description Text (303):

Generally speaking, antibodies for use in these aspects of the present invention

will preferably recognize antigens that are accessible on the cell-surface and that are preferentially, or specifically, expressed by tumor cells. Such antibodies will also preferably exhibit properties of high affinity, such as exhibiting a $K_{sub.d}$ of <200 nM, and preferably, of <100 nM, and will not show significant reactivity with life-sustaining normal tissues, such as one or more tissues selected from heart, kidney, brain, liver, bone marrow, colon, breast, prostate, thyroid, gall bladder, lung, adrenals, muscle, nerve fibers, pancreas, skin, or other life-sustaining organ or tissue in the human body. The "life-sustaining" tissues that are the most important for the purposes of the present invention, from the standpoint of low reactivity, include heart, kidney, central and peripheral nervous system tissues and liver. The term "significant reactivity," as used herein, refers to an antibody or antibody fragment that, when applied to the particular tissue under conditions suitable for immunohistochemistry, will elicit either no staining or negligible staining with only a few positive cells scattered among a field of mostly negative cells.

Detailed Description Text (628):

After 0, 4, and 8 wk on their respective diets with or without the triterpene glycoside, 12 animals per group are selected at random and killed at 9-11 a.m. The liver and kidneys are removed, weighed, processed, and stored at -70.degree. C. for future studies. Blood is obtained at sacrifice by cardiac puncture prior to the removal of the liver and kidneys and analyzed for lipid profiles. The blood serum lipid profiles are analyzed between the treatment and control groups. There are two control groups (Groups 1 and 2) and two treatment groups (Groups 3 and 4). All the groups receive the NRC hamster diet during a two-week quarantine period. Group 1 continues on the NRC diet until the end of the study. Groups 2-4 are fed the NRC diet plus 1% cholesterol for another two-week period to induce hypercholesterolemia. Then, Group 2 will continue on this diet until the end of the study, while Groups 3 and 4 will be fed the same diet supplemented with the triterpene glycoside (e.g., F035 or F094). A summary of the treatment groups is given below, in Table 39.

Detailed Description Text (629):

After 0 (control group only), 4, and 8 wk on their respective diets, with or without the triterpene glycoside, 12 animals per group are selected at random and killed at 9-11 a.m. The livers and kidneys of hamsters were removed, weighed and processed for possible abnormalities. A portion of each organ showing abnormalities was prepared for histology analysis, i.e., frozen for paraffin sections and sections stained with hematoxylin and eosin. Blood was obtained at sacrifice by cardiac puncture prior to surgical removal of the liver and kidneys. Serum was prepared and kept at -20.degree. C. for lipid profile analysis. Hamsters were fasted overnight prior to sacrifice. Data is shown in Table 40 below.

Other Reference Publication (64):

Royal and Park, "Hepatocyte growth factor-induced scatter of Madin-Darby canine kidney cells requires phosphatidylinositol 3-kinase," J. Biol. Chem. 270(46):27780-27787, 1995.

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Terms	Documents
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L11: Entry 8 of 11

File: USPT

Mar 25, 1997

DOCUMENT-IDENTIFIER: US 5614198 A

**** See image for Certificate of Correction ****

TITLE: Bowman-Birk Inhibitor compositions for treatment of inflammatory disease

Brief Summary Text (5):

Yavelow et al., Proc. Natl. Acad. Sci. USA 1985, 82, 5395-5399, reported that a crude soybean extract, if defatted with acetone, effectively blocked cell transformation in vitro. These observations, with epidemiological data, suggested BBI as a putative dietary anticarcinogen, particularly with respect to colon cancer.

Brief Summary Text (7):

Messadi et al., JNCI 1986, 76, 447-452 demonstrated that a soybean extract containing the protease inhibitor BBI suppresses 7, 12-dimethyl-benz[a]anthracene (DMBA)-induced carcinogenesis in the hamster cheek pouch. This oral cancer model has the same histopathology, growth pattern and precancerous lesions as the most common form of human oral cancer, squamous cell carcinoma. It was shown in this study that hamster cheek pouch carcinogenesis can be inhibited by BBI and suggested that human oral carcinogenesis might respond to BBI in a comparable manner. The BBI preparation used in this study was a crude extract of the inhibitor prepared as described by Yavelow et al., Proc. Natl. Acad. Sci. USA 1985, 82, 5395-5399.

Brief Summary Text (8):

Baturay et al., Cell Biology and Toxicology 1986, 2, 21-32 disclose that a BBI preparation, wherein a crude soybean extract is defatted with acetone, suppresses radiation and chemically induced transformation in vitro, with or without enhancement by the co-carcinogen, pyrene. Yavelow et al., 1985, show that either pure BBI or the BBI extract prepared in accordance with their methods suppresses radiation induced transformation in C3H10T1/2 cells. Kennedy et al., 1984, report that either pure BBI or the BBI extract prepared in accordance with their method reduce the levels of chromosome abnormalities in cells of patients with Bloom's syndrome (a genetic disease in which the high levels of chromosome abnormalities are thought to predispose the patients to a higher than normal cancer incidence). Still, other studies suggest that soybean-derived protease inhibitors can have suppressive effects on skin, breast and liver carcinogenesis in vivo.

Brief Summary Text (11):

A soybean extract enriched in BBI, termed Bowman-Birk inhibitor concentrate (BBIC), has achieved Investigational New Drug Status from the Food and Drug Administration and human trials to evaluate it as a human cancer chemotherapeutic agent have begun.

Brief Summary Text (13):

Perlmann et al., Methods in Enzymology 1970, 19, 860-861, have described an elaborate method for obtaining BBI from a defatted soybean extract.

Brief Summary Text (15):

Kennedy et al. teach that it is unnecessary to carry out a procedure requiring complete purification of the extract to the point where the product contains only a single protein. Instead, they found it effective to stop the purification procedure at a point where a crude inhibitor extract is obtained. This crude extract is itself edible and can be used as an inhibitor of malignant transformation of cells, for

example, by oral ingestion. Kennedy et al. disclose a process for preparing a crude soybean extract containing an inhibitor of malignant cell transformation which comprises defatting soybeans and extracting said inhibitor from said defatted soybeans.

Detailed Description Text (4):

Crohn's disease is a chronic recurring process that involves all of the layers of the bowel wall and can occur anywhere in the gastrointestinal tract from the mouth to the anus. Clinical signs typically involve diarrhea (with or without blood), abdominal pain and weight loss. There is often perianal involvement with fistula formation. There may also be severe renal disease associated with Crohn's disease. On endoscopy and histopathology, Crohn's disease is a patchy, segmental disease with distinct borders to the lesion. The intestine becomes thickened and fibrotic and in chronic cases will be stiff like a rubber hose, with long serpentine fissures in the gut lining. The chronic transmural inflammation, intramural sinuses, lymphoid aggregates, and non-caseating granulomas are principal characteristics of Crohn's disease. The etiology of Crohn's disease is unknown.

Other Reference Publication (1):

Baturay et al., "Pyrene acts as a cocarcinogen with the carcinogens benzo[a]pyrene, .beta.-propiolactone and radiation in the induction of malignant transformation in cultured mouse fibroblasts; soybean extract containing the Bowman-Birk Inhibitor acts as an anticarcinogen," Cell Biology and Toxicology 1986, 2, 21-32.

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L11: Entry 4 of 11

File: USPT

Nov 27, 2001

DOCUMENT-IDENTIFIER: US 6323219 B1

TITLE: Methods for treating immunomediated inflammatory disorders

Detailed Description Text (132):

Natural compounds that inhibit trypsin, such as serine protease inhibitors, and in particular, soybean trypsin inhibitor ("STI"), can be used for this invention. Soybean extracts, limabean extracts and similar extracts, and other natural products made from soybean and the like, such as soybean milk, soybean paste, miso, trypsin inhibitor from soybean or limabean and the like, can also reduce phagocytosis by this mechanism. In the preferred embodiment, the naturally occurring composition is soy milk or STI. Additional sources of serine protease inhibitors include, for example, the following plant families: Solanaceae (e.g., potato, tomato, tomatilla, and the like); Gramineae (e.g., rice, buckwheat, sorghum, wheat, barley, oats and the like); Cucurbitaceae (e.g., cucumbers, squash, gourd, luffa and the like); and, preferably, Leguminosae (e.g., beans, peas, lentils, peanuts, and the like).

Detailed Description Text (148):

It has also been discovered that the compounds of formula (I) are inflammatory cell serine protease inhibitors useful for the prevention and/or treatment of a variety of inflammatory-cell disorders, in particular, immunomediated inflammatory-cell disorders. As stated, the term inflammatory cell serine protease inhibitors includes, but is not limited, to leuokocytes such as mast cells, basophils, neutrophils, eosinophils, monocytes, lymphocytes and macrophages. More particularly, the compounds of formula (I) are inhibitors of mast cell serine proteases, such as tryptase and chymase, and are therefore effective for the prevention and treatment of inflammatory diseases, especially those associated with the respiratory tract, such as asthma and allergic rhinitis. In particular, the compounds, compositions and methods of the present invention are especially useful for preventing or treating the late phase bronchoconstriction and airway hyperresponsiveness associated with chronic asthma. In addition, the compounds of formula (I) may be used to prevent and/or treat other immunomediated inflammatory disorders, such as rheumatoid arthritis, rheumatoid spondylitis, osteoarthritis, gouty arthritis, arthritic conditions in general, peptic ulcers, ocular and vernal conjunctivitis, inflammatory bowel disease, Crohn's disease, urticaria, bullous pemphigoid, schleroderma, fibrosis, dermatitis, psoriasis, angioedema, eczematous dermatitis, anaphylaxis, hyper proliferative skin disease, inflammatory skin conditions, hepatic cirrhosis, glomerulonephritis, nephritis, vascular inflammation, atherosclerosis, or restenosis or syncytial viral infections. The compositions for treating inflammatory cell mediated inflammatory disorders include oral, inhalant, intranasal, intravenous, suppository, and topical preparations as well as devices used to administer such preparations.

CLAIMS:

7. The method of claim 6, wherein the immunomediated inflammatory disorder is selected from asthma, allergic rhinitis, rheumatoid arthritis, rheumatoid spondylitis, osteoarthritis, gouty arthritis, arthritic conditions in general, peptic ulcers, ocular and vernal conjunctivitis, inflammatory bowel disease, Crohn's disease, urticaria, bullous pemphigoid, schleroderma, fibrosis, dermatitis, psoriasis, angioedema, eczematous dermatitis, anaphylaxis, hyper proliferative skin disease, inflammatory skin conditions, hepatic cirrhosis, glomerulonephritis, nephritis, vascular inflammation, atherosclerosis, or restenosis.

